CLAIMS

1. A non-human mammal showing a phenotype of autoimmune disease through production of an antibody reacting to an antigen protein for an autoimmune disease or T cell activation.

2. The non-human mammal of claim 1, wherein immune cells from a non-human mammal lacking an antigen gene for the autoimmune disease have been transplanted to the non-human mammal.

3. The non-human mammal of claim 1, wherein immune cells from a non-human mammal that lacks the antigen gene for the autoimmune disease and that has been immunized with the antigen protein have been transplanted to the non-human mammal.

4. The non-human mammal of claim 2 or 3, wherein the immune cells are transplanted to an immunodeficient non-human mammal.

5. The non-human mammal of claim 4, wherein the immunodeficient non-human mammal is a non-human mammal that lacks the RAG2 gene.

6. The non-human mammal of any one of claims 2 to 5, wherein the immune cells are splenocytes.

7. The non-human mammal of any one of claims 1 to 6, wherein the autoimmune disease is pemphigus vulgaris.

8. The non-human mammal of claim 7, wherein the antigen protein is desmoglein 3 protein.

9. The non-human mammal of any one of claims 1 to 8, wherein the non-human mammal is a rodent.

10. The non-human mammal of claim 9, wherein the rodent is a mouse.

11. A method for producing a non-human mammal showing a phenotype of autoimmune disease through production of an antibody reacting to an antigen protein for an autoimmune disease or T cell activation, which comprises the steps of:

(a) immunizing, with the antigen protein for the autoimmune disease, a non-human mammal that lacks the antigen gene for the autoimmune disease,

(b) preparing immune cells from the non-human mammal, and

(c) transplanting the immune cells to a non-human mammal having the antigen protein.

12. The method of claim 11, wherein the immune cells are transplanted

to an immunodeficient non-human mammal.

13. The method of claim 12, wherein the immunodeficient non-human mammal is a non-human mammal that lacks the RAG2 gene.

14. The method of any one of claims 11 to 13, wherein the immune cells are splenocytes.

15. The method of any one of claims 11 to 14, wherein the autoimmune disease is pemphigus vulgaris.

16. The method of claim 15, wherein the antigen protein is desmoglein 3 protein.

17. The method of any one of claims 11 to 16, wherein the non-human mammal is a rodent.

18. The method of claim 17, wherein the rodent is a mouse.